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(54) **SHOPPING SCOUTS WEB SITE FOR REWARDING CUSTOMER REFERRALS ON PRODUCT AND PRICE INFORMATION WITH REWARDS SCALED BY THE NUMBER OF SHOPPERS USING THE INFORMATION**

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(58) **Field of Search** ..... 705/14, 10, 26, 705/27, 37, 400

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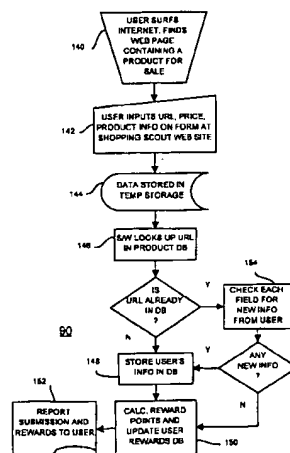
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(57) **ABSTRACT**

A web site on the world-wide-web allows users to search a product/price database. The database contains product and price information for a wide variety of products from many different suppliers such as online and offline stores. Information in the database is collected and corrected by submitting users who are rewarded for product submissions. A submitting user inputs data on new product, price, supplier, or rating information using an online form. The user highlights coordinates of the model, make, and price on the supplier's web page, so that automated software can later check the supplier's web page for price and product updates. The submitting user is rewarded for submitting product and price information. When other consumer-users search the database and find the product, the submitting user is again rewarded. When these other consumer-users follow a link to the supplier's web page for that product, the submitting user is further rewarded. Thus future rewards depend on the number of consumer-users viewing the information submitted. Higher rewards are granted for more popular products. Correcting-users can correct errors when viewing the supplier's web page by pressing a correct-error button. The correcting user is rewarded and future rewards are shared among the submitting user and the correcting user as consumer-users view the corrected information.

19 Claims, 11 Drawing Sheets



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TITLE: Shopping scouts web site for rewarding customer referrals on product and price information with rewards scaled by the number of shoppers using the information

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Abstract Text - ABTX (1):

A web site on the world-wide-web allows users to search a product/price database. The database contains product and price information for a wide variety of products from many different suppliers such as online and offline stores. Information in the database is collected and corrected by submitting users who are rewarded for product submissions. A submitting user inputs data on new product, price, supplier, or rating information using an online form. The user highlights coordinates of the model, make, and price on the supplier's web page, so that automated software can later check the supplier's web page for price and product updates. The submitting user is rewarded for submitting product and price information. When other consumer-users search the database and find the product, the submitting user is again rewarded. When these other consumer-users follow a link to the supplier's web page for that product, the submitting user is further rewarded. Thus future rewards depend on the number of consumer-users viewing the information submitted. Higher rewards are granted for more popular products. Correcting-users can correct errors when viewing the supplier's web page by pressing a correct-error button. The correcting user is rewarded and future rewards are shared among the submitting user and the correcting user as consumer-users view the corrected information.

Brief Summary Text - BSTX (8):

FIG. 1 is a diagram of electronic commerce (e-commerce) using the Internet. A shopper uses browser 10 on a local client personal computer (PC) to access web sites on Internet 20. The user can connect directly to online stores 12, 14, and can search for products within each store using the store's local search engine. For example, a user looking for a special book title can connect to amazon.com (of Seattle Wash.) as store 12, and to

BarnesAndNoble.com

as store 14, and perform two search for the book's title. Each store 12, 14 presents its price and book description to the user of browser 10. The user can then buy the book from the store with the lower price by pressing virtual buttons displayed on the web page. The user is then shown a checkout page, where the user enters his shipping address, credit card, and other information to complete the purchase.

#### Brief Summary Text - BSTX (9):

The user may instead connect directly to online mall 16. Online mall 16 has private connection to store 12, 14 and other stores, perhaps receiving a database and updates of current product and price information from each store 12, 14. When the user performs a product search on line mall 16, prices from many different stores are presented together on the same web page, allowing a quick comparison. For example, a book in a local walk-in books that costs \$15 may be available for \$12 at store 12 (amazon.com.) However, a search for the book at online mall 16 shows another store 14 with the same book for only \$10. Perhaps the user was not aware of the existence of store 14 since it is relatively unknown. The user thus saves an additional \$2 by using online mall 16 to find an online store with lower prices.

#### Brief Summary Text - BSTX (11):

To perform a more thorough search, the user can also use a software program or agent known as an Internet robot or 'bot'. The user of browser 10 connects to 'bot' service 24 and enters the product information to search for. 'Bot' service 24 then sends out a search to stores 12, 14 for the product, and also searches other sites on the Internet. 'Bot' service 24 then reports its results back to browser 10.

#### Brief Summary Text - BSTX (12):

Online auctions may also have the desired product for sale. 'Bot' service 24 may also perform a search at online auction site 18. Online auctions may provide much lower prices than online stores 12, 14. For example, a book that retails for \$20 and is discounted to \$16 at online store 12 may be found for \$2 at online auction site 18 when few are bidding on the book. See U.S. Pat. No. 5,835,896 by Fisher et al., and assigned to Onsale, Inc. of Menlo Park, Calif. Some online auction sites 18 allow purchasers to leave feedback on sellers. Such feedback is accumulated and scored to provide other bidders with information about the seller's integrity.

Brief Summary Text - BSTX (13):

Change-detection web site 29 can be used to **periodically** and automatically **search** online auction site 18 for a particular item and price. Thus items that are infrequently on auction can be found if the user is patient. See U.S. Pat. No. 5,898,836 by Freivald et al., assigned to NetMind Services, Inc. of Campbell, Calif.

Brief Summary Text - BSTX (16):

Ordinary persons who are not members of the press can also post reviews and comments about products on the Internet. Newsgroups have traditionally been used by consumers to post comments about various products. Newsgroup **search** site 28 can be used to find such comments.

Brief Summary Text - BSTX (18):

While such product reviews and consumer comments and opinions add to the usefulness of the overall Internet, they may not be directly linked to the product pages of online stores 12, 14, forcing users to independently navigate to stores 12, 14. Since price information is not always linked to product reviews, users must still **search** for the lowest prices using `bot` service 24 or online mall 16.

Brief Summary Text - BSTX (19):

Although the cost of setting up an online store or service is much lower than for traditional stores and services, the cost is still significant. The time required to accumulate product reviews or build a database of products and prices for an online mall is significant. While software can be used to **search** for and collect information from the Internet, often the software is confused by the information retrieved, perhaps reading a phone number or product ID as a price. Human intervention and checking of this information is often required, at an added expense. As prices change, the database must be updated or corrected.

Brief Summary Text - BSTX (22):

A searchable database contains information submitted by rewarded users. A plurality of records each contain information presented to a searcher when **search** terms input by the searcher match terms in the record. A data-entry module receives information from a rewarded user. The information is written to a target record in the plurality of records.

Brief Summary Text - BSTX (24):

In further aspects of the invention a network connection is coupled to the data-entry module. It receives information from the rewarded user on a remote node of a network and sends information to the searcher on a different remote node of the network. Thus the searchable database is accessed through the network. The network is an Internet, and the searcher accesses the searchable database through a web page search form and the rewarded user accesses the data-entry module through a web page entry form.

Brief Summary Text - BSTX (26):

In still further aspects the data-entry module receives the information from the rewarded user using an online form, an email message, or a file transfer. The information submitted by the rewarded user includes at least a portion of a uniform-resource-locator (URL) and a price, a product name, a manufacturer, a supplier, and/or a model name.

Detailed Description Text - DETX (12):

Software agents can also be used to search the web for product information. Automated data acquirer 32 searches product pages for various online stores and extract product and price information. This information is entered into database 30. However, since this information is automatically obtained by software, errors may occur or the information may be incomplete. The software may not correctly identify the price or product information. Consumers that find errors in the database records automatically obtained by automated data acquirer 32 can correct these errors using data entry module 34.

Detailed Description Text - DETX (14):

Database refresher 38 periodically checks records in database 30 by re-fetching supplier web pages referenced in database 30. Database refresher compares the product and price information in database 30 to that for the newly-fetched page and updates database 30 is necessary. When the price or product information cannot be found on the newly-fetched page, or when the page cannot be found, the record in database 30 is flagged and being in error.

Detailed Description Text - DETX (15):

Consumers can then check these errors found by database refresher 38 and

receive rewards for making the corrections. A list of product records with known errors, and their uniform-resource-locator (URL) addresses of the supplier pages can be shown to users by GUI 40. The supplier web page can be presented to the user by GUI 40 with the data fields such as price highlighted in color. The user can check the error and move the highlight to a new location of the price on the web page. The newly-highlighted price can then be extracted into the database, and the new field location stored. Users then confirm the fixes to the errors and receive rewards.

#### Detailed Description Text - DETX (17):

FIG. 3 is a form shown to a consumer-user, allowing product and price information to be input to the database. Form 50 is generated by the GUI and shown to the user on his browser window. The user types in or pastes the URL address for the supplier's web page that contains the product into URL-entry box 52. This URL is for the web page with the product and price information, sometimes known as a catalog page. Usually only one product or group of related products is shown on the supplier's web page. The URL is not for the supplier's home page or other index or multi-product web pages but is rather the low-level catalog page.

#### Detailed Description Text - DETX (23):

FIG. 4 illustrates a record in the product/price database. Record 60 contains information about a single product for sale at perhaps dozens of different supplier's web sites. URL field 62 contains the URL address of the product or catalog page of the supplier with the lowest price. When a different supplier lowers their price to become the new lowest-price supplier, then URL field 62 is replaced with the URL for the new supplier's product catalog web page. Users cause this field to be updated by using form 50 of FIG. 3 when they find a lower price.

#### Detailed Description Text - DETX (27):

Payment details fields 68 contains information about the payment method (which credit cards, check, etc.) and how to order the product (online, by phone, mail-order, etc.). Usage fields 67 contain information about when the product's record was updated, and whether URL field 62 is still valid or has expired. A list of comments from consumer-users and ratings for the product can be included that link record 60 to specific comments or a linked list of comments.

#### Detailed Description Text - DETX (28):

Usage fields 67 also contain frequency counters that store the number of times users have found the page when performing a product search, and how many times consumer-users have followed a link and passed-through to the supplier's product page once they found the product using the search of the product/price database. If it is known whether the user actually bought the product, the number of times users bought the product can also be stored in usage field 67, although usually only the number of times users have followed a link is known since the supplier's product page is at an independent web site. Coordinates 65 are not stored for parameters in usage fields 67.

#### Detailed Description Text - DETX (29):

Some sites only allow access to registered users. Thus access to some URL's may not be possible. There are two solutions. One is for the product/price database web site to open an account at each of these sites, then use the account to gain access to these pages. Another solution is for the user to register or have been registered and login to the site. In any case, a field is added that indicates when membership or registration is required. A rating field can also be added to indicate if the supplier's web site is fast, slow, or a dead link.

#### Detailed Description Text - DETX (31):

FIG. 5 shows events and rewards earned by consumer-users. During session 100, consumer-user A fills out form 50 (FIG. 3) to submit new information about a product Q, including the make, model, and price, and the URL of the supplying store's product web page. The account manager adds 20 points to user A's reward count for submitting the new information.

#### Detailed Description Text - DETX (32):

The information submitted by user A is optionally verified before it is loaded into the product/price database for viewing by other users. Software uses the URL submitted to fetch the product web page from the online store selling the product at the low price. The software attempts to locate coordinates on the page to extract the make, model, and price. Often, a simple text search can be used to find the field. A search for "1299.99" should find the price field if the price submitted by user A (\$1299.99) is still valid. The software can remember the location of the text found by the text search as the location or coordinate of the price field on the web page. The software may also store text strings that immediately precede or follow the price.

#### Detailed Description Text - DETX (33):

Sometimes the text **search** finds the wrong field. For example, the make of "Supercomp" may find text in a page header or banner ad, rather than in the product description. The software can display the product web page with the make field highlighted to the user. The user can then move the highlighting to the product description to correctly highlight the make information. Thus the user is queried to correct errors in automated software data acquisition. If the price of other information has changed, the user is allowed to correct the information.

#### Detailed Description Text - DETX (34):

Once the verification software is able to verify the product and price information, the information is posted to the database, allowing others to find the product in a **search**. User A is credited with another 4 points for completing the verification process. In the future, software can automatically refetch the product web page and extract the price and other information and updated the database, using the field locations approved by the user during verification. Thus a price increase should be automatically found and the database updated.

#### Detailed Description Text - DETX (35):

Later on, during session 102, user B **searches** for a product and finds product Q that was entered into the database by user A. User A receives one additional point for the database "hit" on product Q. The account manager increases the reward point count by one.

#### Detailed Description Text - DETX (36):

User B is presented with the price and basic product information such as the model name as a result of his **search**. Other products and prices may be listed as well. Hyper-links, which normally appear as colored underlined text, or as an icon, are displayed next to each product. If user B clicks on one of these hyper-links, his browser fetches the product web page for that product from the supplier's web site. The product web page normally shows more information, such as a picture and an extended description of the product.

#### Detailed Description Text - DETX (47):

A consumer-user surfs the Internet and finds a product for sale at an online store that is not necessarily affiliated with the shopping scouts web site, step 140. The user then opens another browser window and connects to the shopping scouts site, and navigates to the data-input form 50 (FIG. 3) which is



displayed on his browser window. The user inputs the product, make, model, and price information onto the data entry form, step 142. The user can either manually type in the information, or preferably he uses the copy-paste function to copy information into the data-entry form from the other browser window that is viewing the supplier's product web page. The URL of the supplier's web page is also copied to the data entry form. Since these URL's are often long and complex, it is best to copy and paste the URL from the other browser window's URL/Address field rather than re-type the URL.

Detailed Description Text - DETX (48):

The URL, product, price, and any other information is stored in a temporary storage, step 144, rather than in the main product/price database. Verification software at the shopping scouts site then optionally reads the URL and re-fetches the supplier's web page, step 146. The URL is then compared to URL's in the product/price database to see if the product is already in the database, step 146. If the URL is already in the database, each field of information entered by the user in step 142 is compared to the fields in the database record, step 154. If any new information is found, then the new information is entered into the database, step 148.

Detailed Description Text - DETX (49):

When the URL is not in the database, the product from this particular supplier being entered is new. The URL, product and price information is optionally verified and loaded into a new record in the product/price database, step 148. The number of reward points is determined, based on whether the product is new or just some of the data is being updated. The additional reward points are added to the user's reward counter in the rewards and accounts database by the accounts manager, step 150.

Detailed Description Text - DETX (53):

Web page 170 is generated by the shopping scouts web site's servers. After a user has performed a search, and click on a link to view the product, web page 170 is displayed. Web page 170 includes frame 172, which displays the supplier's product web page. The data viewed inside frame 172 is from the supplier's online store, while the other data outside of frame 172 is from the shopping scouts web site.

Detailed Description Text - DETX (59):

Should the user wish to search for another product, he can enter the search

keywords in search box 176. A new search is then performed.

Detailed Description Text - DETX (60):

User Search and Correction--FIGS. 8A-8B

Detailed Description Text - DETX (61):

FIGS. 8A, 8B are a flowchart for a consumer-user searching the product/price database and correcting errors in the database. Search and correction process 110 may include several sub-routines and variations not shown. In FIG. 8A, a user desired to buy product Q at the lowest possible price. The user logs on or connects to the shopping scouts web site, step 112, knowing that other shoppers may have looked for the same product at many online stores and malls, and the lowest price they found should be listed in the product/price database.

Detailed Description Text - DETX (62):

The user searched the product/price database for the product name, step 114, or perhaps using a more advanced search with a combination of the make , model and other information. If no matches are found by the search, step 116, then the user can repeat or modify the search. Otherwise, when a match is found, the matching product or products are displayed to the user, step 118. Several products may first be listed together on a first web page, with URL links to each product and supplier's web page. When only one product is displayed, the database information for the expected price can be displayed next to the seller's web page in a frame, as shown in FIG. 7. A button or icon allowing the user to correct an error in the database is also shown by the database information.

Detailed Description Text - DETX (63):

The user can then choose to perform a new search, step 119, and return to the search step 114. The user can simply type in a search term and execute the search immediately, or can click on a button to return to a search-entry page.

Detailed Description Text - DETX (64):

Continuing in FIG. 8B, the user can make corrections by pressing the "correct-error button, step 122. The user then selects which fields to correct, step 128. The current information for that field is displayed to the

user, step 132, allowing the user to correct the error, step 134. Many variations of user interfaces and web pages and forms can be used to allow the user to change errors, some by showing the supplier's web page with the new information alongside the database information. When the user knows of a new online store with a lower price for the product, he can enter the new URL and enter the new price. The software may ask the user to locate the make, model, and price fields on the supplier's web page using highlighting or another method.

#### Detailed Description Text - DETX (70):

Initial URL's are input, step 72, to input queue 74. System administrators at the shopping scouts web site can enter starting URL's of various online stores. Users can also input URL, price, and product information using a formatted method, using a file such as a comma-separated text file, step 71. Using formatted input allows users to enter many products at once rather than just one at a time using form 50 of FIG. 3. The URL's from user's formatted files are also input to input queue 74.

#### Detailed Description Text - DETX (71):

Each URL entry in input queue 74 is compared to existing URL's in the product/price database. If the URL already exists in the database, the following URL is selected from input queue 74. Otherwise, the supplier's web page is fetched from the Internet, step 76, using the URL from input queue 74.

#### Detailed Description Text - DETX (72):

If the web page pointed to by the URL cannot be fetched, the URL is loaded into bad URL storage 78. These bad URL's can be checked later by being re-loaded into input queue 74. Sometimes web pages are temporarily unavailable when the online store performs maintenance or when network problems occur.

#### Detailed Description Text - DETX (73):

When the web page is found, the product and price information is extracted from the web page. The page's URL, the product make, model, and price information extracted are then stored in the product/price database, step 82. The software may not extract all fields correctly, so some of the data may be in error. Users can be encouraged to check the extracted information and correct errors by the promise of rewards for error correction. A list of newly-extracted web pages can be made available to user, allowing them to check

these new pages. Also, when software is unable to find data fields on the web page, and error can be flagged, and a list of web pages with flagged errors can also be posted at the shopping scouts web site, allowing users to earn rewards by checking and correcting these pages.

Detailed Description Text - DETX (74):

The web page is also searched for hyperlinks. Each of these hyperlinks that points to a different web page have their URL's extracted, step 84. These extracted URL's are then loaded into input queue 74. Thus process 70 can crawl through a supplier's web site, following links to find other products that can be added to the database.

Detailed Description Text - DETX (75):

Reports 81 are also generated for the system administrators. Users who submit formatted files of URL's also receive reports 81 that list which URL's were new and valid. Reports 81 also include the number of reward points given to the user for the URL's submitted. Formatted data submission thus allows users to quickly earn large rewards, while the shopping scouts web site quickly builds up the product/price database.

Detailed Description Text - DETX (91):

Users can input a product and a price that they are willing to pay for products they would like to buy, rather than actual products they find. Other users could then search for these products and inform the submitting user. Variable prices can also be used, such as bid and ask prices, or prices that vary with the day and hour, or auction prices. The web site can also directly handle purchase transactions, rather than simply refer users to the supplier's web site. Additional reward points can then be given to the submitting user when another user actually buys the product. The product/price database can rely on advertising revenue or referral fees from suppliers.

Detailed Description Text - DETX (94):

The web site includes software to follow all links on a page to find other products. A system administrator can enter a URL as a start point, such as a home page at an online store or mall. The automated data-acquisition software then finds and follows all links. URL's for products entered by users can also serve as start points for the automated data acquirer. Multiple processes or jobs can be launched and processed in parallel. Various filters can be used to automatically find data on pages that are found. Fraud-prevention software can

be used to detect certain suspicious activity by users, such as submitting dummy information. Rewards may be inhibited when the submitting user views his own products so that users cannot reward themselves merely by repeatedly viewing their own submissions. Various software and web agents and assistants can be used to help users enter data as a user surfs the web. Software may be used to prevent a single user from having multiple user names.

Claims Text - CLTX (2):

a plurality of records, each record containing information presented to a searcher when search terms input by the searcher match terms in the record;

Claims Text - CLTX (12):

3. The searchable database of information submitted by rewarded users of claim 2 wherein the network is an Internet, the searcher accessing the searchable database through a web page search form and the rewarded user accessing the data-entry module through a web page entry form.

Claims Text - CLTX (15):

5. The searchable database of claim 4 wherein the information submitted by the rewarded user includes at least a portion of a uniform-resource-locator (URL).

Claims Text - CLTX (18):

a URL queue containing a plurality of URL's;

Claims Text - CLTX (19):

an automated data acquirer, coupled to the plurality of records, receiving a starting URL from the URL queue, for fetching a web page pointed to by the starting URL, the automated data acquirer parsing the web page for links to other web pages, the automated data acquirer extracting URL's for the links and writing the URL's to the URL queue;

Claims Text - CLTX (20):

wherein the automated data acquirer also searches the web page for product and price information, the automated data acquirer writing the product and price information to a target record in the plurality of records,

Claims Text - CLTX (22):

8. The searchable database of claim 7 wherein a URL submitted by the rewarded user is input to the URL queue, the automated data acquirer searching the web page submitted by the rewarded user for links to other web pages, whereby links to other web pages from a user submission are followed to find other product and price information.

Claims Text - CLTX (35):

searching the price database for a product matching a search request by a second user;

Claims Text - CLTX (36):

displaying a portion of the first record to the second user when the first record matches the search request;

Claims Text - CLTX (77):

search means, coupled to the database means, for retrieving matching records from the database means that meet search criteria from searching users, the search means displaying information from matching record to the searching users; and

Claims Text - CLTX (78):

use-reward means, coupled to the search means, for adding another reward to the submitting user when a portion of the record is viewed by the searching user;

Claims Text - CLTX (81):

correction means, coupled to the search means, for receiving a correction from a correcting user, the correction means updating a record in the database means in response to the correction;

Claims Text - CLTX (84):

split-rewards means, coupled to the search means, for splitting a reward among the submitting user and the correcting user when a corrected record is viewed by a searching user,

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**705/14**

Current US Cross Reference Classification - CCXR (1):

**705/26**

Current US Cross Reference Classification - CCXR (2):

**705/400**